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INLAND TRANSPORT COMMITTEE

Joint Meeting of the RID Safety Committee and the Working Party on the Transport of Dangerous Goods
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HARMONIZATION WITH THE UN MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

PRESURE RECEPTACLES FOR LIQUIDS

NEW CHAPTER 4.1.3.6

Transmitted by CEFIC

SUMMARY	
Executive Summary:	The information paper seeks to highlight the differences between 4.1.3.6 of UN 14th edition (Pressure receptacles for liquids and solids) and existing ADR/RID 4.1.4.4 (PR1-PR7).

1. INTRODUCTION

The Ad Hoc Working Group on the Harmonization of RID/ADR/ADN with the UN Recommendations on the Transport of Dangerous Goods met in Geneva, Palais des Nations, from 23-25 May 2005. Proposed draft amendments are given in the addendum to the report of the working group, TRANS/WP.15/AC.1/2005/42/Add.1. Some amendments, which should be discussed by the Joint Meeting in plenary, have been left in square brackets. One of the open issues was the deletion of the existing ADR/RID 4.1.4.4, particular requirements applicable to the use of pressure receptacles for substances other than those of class 2.

During the discussion CEFIC offered to submit a comparison table highlighting the differences between 4.1.3.6 of UN 14th edition (Pressure receptacles for liquids and solids) and existing ADR/RID 4.1.4.4 (PR1-PR7).

2. COMPARISON TABLE

In table 1, the above mentioned comparison table is given. Aspects addressed are the test pressure, capacity, filling, periodic test & inspection and requirements as given in the relevant packaging instruction for the UN numbers listed in existing PR1 – PR7. This comparison table is drafted to facilitate the discussion on whether 4.1.4.4 can be deleted. It appeared that PR4 - PR7 are assigned to only one or two individual UN numbers and are in some aspects substances specific.

SUGGESTIONS FOR CONSIDERATION

With reference to document TRANS/WP.15/AC.1/2005/42/Add.1 regarding the existing 4.1.4.4 the following alternatives are offered for further consideration:

Alternative 1:

- Delete 4.1.4.4
- Insert in chapter 1.6 at the appropriate place (1.6.1.5?) the following:
  ”Pressure receptacles for substances other than those of class 2, manufactured before 1 January 2007/1 July 2007 in according with the requirements of ADR/RID 4.1.4.4 in force up to 31 December 2006, but which are not in accordance with the requirements of 4.1.3.6, applicable as from 1 January 2007, may continue to be used for their entire lifetime under the provisions as prescribed in 4.1.4.4.”
- For UN 1614 (listed in PR7), replace P601 with P099 in 3.2, dangerous goods list, column (8)
- Delete all PR-1 to PR7 in 3.2, dangerous goods list, column (8)

Alternative 2:

- Delete 4.1.4.4
- Delete all PR1 to PR7 in 3.2, dangerous goods list, column (8)
- Retain the specific text for the individual UN numbers of PR4, PR5 and PR7 in new PPxx in the relevant packing instruction as follows:
  (from PR4)
  Insert in P601: PPxx For UN No. 1185, the mass of the contents shall not exceed 0.67 kg per litre capacity. A package shall not weight more than 75 kg.
  (from PR5)
  Insert in P601: PPxy For UN No. 2480 and 2481, the substance shall be packed in receptacles made of pure aluminium having a wall thickness of not less than 5 mm or in receptacles of stainless steel. The receptacles shall be fully welded.
  (from PR7)
  Insert in P601: PPxz For UN No. 1614, when completely absorbed by an inert porous material, shall be packed in metal receptacles of a capacity of not more than 7.5 litres, placed in wooden cases in such a manner that they cannot come into contact with one other. The receptacle shall be entirely filled with porous material which shall not shake down or form dangerous spaces even after prolonged use under impact, even at temperatures of up to 50 °C.
- Insert in chapter 1.6 at the appropriate place (1.6.1.5?) the following:
  ”Pressure receptacles for substances other than those of class 2, manufactured before 1 January 2007/1 July 2007 in according with the requirements of ADR/RID 4.1.4.4 in force up to 31 December 2006, but which are not in accordance with the requirements of 4.1.3.6, applicable as from 1 January 2007, may continue to be used for their entire lifetime under the provisions as prescribed in 4.1.4.4.”

CEFIC prefers the above “alternative 1” to align with the UN Model regulations as much as possible.

Table 1: Comparison of new 4.1.3.6 (UN 14th edition) and existing 4.1.4.4 (PR1-PR7)

RID/ADR PRno.	RID/ADR Relevant packaging instruction of the UN numbers listed in PRno.	Test pressure (bar)		Capacity (l)		Filling		Periodic test/inspection		Miscellaneous
		New 4.1.3.6 + Packing instruction	According to PRno.	New 4.1.3.6 + Packing instruction	According to PRno	New 4.1.3.6 + Packing instruction	According to PRno	New 4.1.3.6 + Packing instruction	According to PRno	
PR1	P400 13x P402 6x P401 1x P601 1x	10 6 6 10	10 10 10 10	According to chapter 1.2, "pressure receptacle" Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	450	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	90% (5% empty at 50 °C)	10 years (P400, 401, 402, 601)	5 years	PR1: inert gas 0.5 bar New 4.1.3.6: inert gas 0.2 bar (specified in P400, 401, 402)
PR2	P401 4x	6	4	According to chapter 1.2, "pressure receptacle" Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	450	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	85% or specific (kg/l)	10 years (P401)	5 years	PR2 -
PR3	P601 6x P602 1x	10 10	10 10	According to chapter 1.2, "pressure receptacle" Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	250	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	1 kg/l	10 years (P601, 602)	5 years, meticulous inner inspection	PR3: 3 mm wall thickness, <150 l capacity
PR4	P601 1x	10	10	According to chapter 1.2, "pressure receptacle" Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	75 kg weight package	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	0.67 kg/l	10 years (P601)	5 years	PR4 -

PR5	P601 2x	10	5	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	Not specified in PR5	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	90%	10 years (P601)	5 years	PR5: 5 mm wall thickness for aluminium receptacle drum >100 kg, rolling hoops or stiffening ribs needed
PR6	P601 1x	10	Calc. pressure 21 2 bar leak proof ness test	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	450	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	92%	10 years (P601)	2 years, internal inspection	PR6: -
PR7	P601 1x (RID/ADR) P099 (UN)	?? (P099)	6	?? (P099)	7.5	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	Not specified in PR7	10 years (P601)	Not specified in PR7	PR7 Absorption in inert porous material
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